Automatic Recall (1044)

Automatic Recall (CLASS[SM]) is an incoming call management feature that allows the customer to automatically call back the last incoming number without having to know the number that called. If the called line is busy, the called line will be checked periodically and the customer will be notified by a special ring when the called line becomes idle. This capability requires that both the originating and terminating central offices be equipped with Common Channel Signaling (CCS) SS7 and be interconnected by SS7.

Generic Name of ONA Service	Product Name	BSE or CNS
Automatic Recall	AM - Automatic Callback	CNS
	BA - Return Call	CNS
	BS - Call Return	CNS
	NX - Call Return	CNS
	PB - Call Return	CNS
	SWB - Call Return [SM]	CNS
	USW - Last Call Return	CNS

FEATURE OPERATION:

The customer must contact the telephone company to initiate Automatic Recall service. A service order is required. Once the appropriate translations have been made to the customer's line, the customer activates the service by dialing the service access code *69 (1169 for rotary dial), then depending on how the Local Exchange Company chooses to implement Automatic Recall, one of the following happens:

- One-Level Activation Procedure

  Upon activation using *69 (1169 for rotary dial), the called line is checked for busy/idle status and class of service. If the called line is idle and the class of service is permissible, call setup is attempted. If the called line is busy, the customer receives an announcement stating the called line is busy. The line will be checked periodically for busy/idle status and when the line becomes idle the customer will hear a special ring. Upon answering the special ring, one of the following happens:

1. Call setup is attempted, the customer hears audible ringing while the called party receives power ringing. Or

2. The customer receives an announcement indicating the following:

   1A ESS & 5ESS: The called line has become busy again, hang up and try your call again. (This terminates Automatic Recall for this activation.) The customer can reactivate Automatic Recall by again using the service access code.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

[SM] Call Return is a service mark of Southwestern Bell Telephone Company.

DMS-100: The called line has become busy again, monitoring of the line will resume, hang up and wait for the special ringback.

- Two-Level Activation Procedure:

  Upon activation using *69 (1169 for rotary dial), an announcement is provided informing the customer that Automatic Recall has been accessed. If the incoming number is valid, the number, date and time of the call is voiced back to the customer. (If the number is marked private then a private indication is voiced back to the customer instead of the number.) The customer is then instructed to dial "1" to activate Automatic Recall or hang up to abort the request. If the customer dials "1", the service proceeds as described above under the One-Level Activation Procedure.

To cancel all outstanding Automatic Recall requests, the customer may deactivate the service by using *89 (1189 for rotary dial).

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

Note: * Available on intraoffice basis with generic 1AE9.

2. The serving central office switch must be equipped with the appropriate CLASS[SM] Automatic Recall software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS and Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7. This service is only offered on an intraLATA basis at this time.

3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to customers that have denied originating and denied terminating treatment and multiline hunt groups that cannot have ringback directed to the calling station. In addition, because of the special ringing, this service may not work where channel banks (FX service), MFTs or bridge lifters are used (depending upon circuit design).

4. The special ringing that the customer hears when call setup is being attempted consists of 2 short rings and 1 long ring in 6 seconds. Some telephone companies use this pattern for more than one service.

5. There are some digital loop carrier plug-ins that will not transmit the required special ringing.

6. The customer can have multiple Automatic Recall activations in effect concurrently.

7. Automatic Recall cannot be activated towards a line that has Call Forwarding Variable or Selective Call Forwarding Activated. If the service cannot be activated, the caller is routed to a denial announcement or tone.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

8. In some electronic key sets, power ringing generates a preset ringing pattern regardless of the ringing pattern generated by the originating central office. Therefore customers with these electronic sets may not be able to differentiate regular ringing for incoming calls from special ringing for Automatic Recall.

9. The length of time the called line is monitored for busy/idle status is a telephone company settable parameter ranging from 16-45 minutes. The interval is set on a per switch basis, and is generally the same throughout a regional company.

10. The customer can use the telephone for incoming and outgoing calls while waiting for the special ringback. However, the special ringback will not be attempted while the customer is using the telephone.

11. References:

    - TR-NWT-000227 CLASS[SM] Feature: Automatic Recall (A Module of LSSGR, FR-64 [formerly FR-NWT-000064]) Issue 3, June 1993.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

Call Detail Recording Reports (1045)

The Call Detail Recording capability will provide the customer with a data record of all completed calls made to a designated telephone number. The call details will not be delivered in real time but as a paper printout or via magnetic tape on a weekly basis (or mutually agreed upon time interval).

Generic Name of ONA Service	Product Name	BSE or CNS
Call Detail Recording Reports	BA - Call Detail Recording Reports	BSE
	BS - Call Detail Information	BSE
	NX - Monthly Detailed Recording	AN
	SWB - Recording Service	AN
	USW - Access Service Billing Information	BSE

FEATURE OPERATION:

This service is the recording of the details of the customer messages and, when requested by the customer, the provision of those details to the customer. This service is ordered through the telephone company's appropriate tariffs or on an individual case basis.

When the capability is ordered the following detail will be provided: originating billing telephone number (ANI), terminating telephone number if dialed before carrier cut through (called number), connect time (time of day the call originated), elapsed time (duration of the call), date of the call. If the capability is ordered with the Voice Grade Circuit Switched BSA, the Carrier Identification Code (CIC) of the customer is also provided.

The Call Detail Report will be sorted in the following order:

Terminating Number

Originating Number

Date

Time of Day

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. Call Detail Recording capability will only record intraLATA calls.

2. The record format will be in the EMR/EMI standard format.

3. Recording is provided 24 hours per day seven days a week.

4. Telephone companies provide this service in their operating territory. This service may be provided on a state or end office basis. The information provided may vary by company.

5. Telephone companies can provide for the recording of all the customer's messages, provided that they are accessible by the telephone company's recording equipment. The recording equipment will be provided at locations selected by the telephone companies.

6. In some regional companies, this service may be limited to one, two or various combinations of Feature Group A protocol service, Feature Group B protocol service, or Feature Group D protocol service.

7. References:

   - GR-610-CORE, Message Detail Recording (MDR), Issue 1, November 1993, Revision 1 - December 1994, Revision 2 - June 1995.

   - TR-TSY-000615, Generic Requirements for Message Detail Recording (MDR) Access Interfaces, Issue 1, July 1990.

   - GR-1100, Bellcore Automatic Message Accounting Format (BAF) Requirements, Issue 2, December 1997, (replaces TR-NWT-001100, Issue 2)

This service, if offered as a BSE, is associated with the Circuit Switched Line and Trunk basic serving arrangements.

Call Forwarding - Busy Line Intraswitch (1046)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is activated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number must be in the same central office switch. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line Intraswitch	AM - Busy Line Transfer	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Busy Line	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forward Busy Line	CNS
	SWB - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line/Don't Answer	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Multiline customers can have CFBL on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same central office that serves the base station.

4. Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

5. References:

   - Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504)
   - FSD 01-02-0801 Series Completion, Issue 1, May 1990, Module TR-TSY-000568.
   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line Interswitch (1047)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is activated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number may be in the same or in different central office switches. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line Interswitch	AM - Busy Line Transfer	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Busy Line	CNS
	NX - Call Forwarding 2	CNS
	PB - Busy Call Forwarding Extended	CNS
	SWB - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line (Expanded)	CNS
	USW - Call Forwarding Busy Line/Don't Answer (Expanded)	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS24

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central office.

4. Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

5. References:

   - Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504).
   - FSD 01-02-0801 Series Completion, Issue 1, May 1990, Module TR-TSY-000568.
   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation (1048)

This capability provides ESP's clients with the ability to activate the Call Forwarding Busy Line and Call Forwarding Don't Answer features by dialing an access code in the form of *XX. The ESP's client will be able to deactivate the Call Forwarding Busy Line and Call Forwarding Don't Answer features by dialing another access code, also in the form of *XX.

Limitations may apply, depending on the type of switching systems serving the client.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation	AM - Customer Control of Busy Line Transfer or Alternate Answering	CNS
	BS - Customer Control of CF BL/DA	CNS
	NX - CallAbility[SM] Feature Access	CNS
	PB - Call Forwarding Busy Line/Don't Answer- Fixed	CNS
	USW - Call Forwarding BL, Customer Programmable	CNS
	USW - Call Forwarding DA, Customer Programmable	CNS

FEATURE OPERATION:

Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to activate and deactivate Call Forwarding Busy Line (CFBL) and/or Call Forwarding Don't Answer (CFDA). Activation of these services allows the customer to have an incoming call redirected to a telephone number preset at the time the service was established by service order. The service is activated/deactivated by the subscriber dialing the assigned access code. Access codes are in the same format as those for Call Forwarding Variable (*XX). CFDA and CFBL may have different activation/deactivation codes. The party activating these services does not have to be in the same central office switch as the forwarded telephone number.

Also see the service called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number."

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS27

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL/DA - Customer Control on each line if desired.

SM CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

3. References:

   - TR-TSY-000586, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1450, Call Forwarding Subfeatures; Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number (1049)

This capability provides the ESP's client with the ability to change the Forward-To number for Call Forwarding Busy Line by dialing an access code in the form of *XX, and to change the Forward-To number for Call Forwarding Don't Answer by dialing another access code, also in the form of *XX. Limitations may apply, depending on the type of switching system serving the client.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number	AM - Customer Control of Busy Line Transfer or Alternate Answering	CNS
	PB - Call Forwarding Busy Line/Don't Answer Programmable	CNS
	USW - Call Forwarding BL, Customer Programmable	CNS
	USW - Call Forwarding DA, Customer Programmable	CNS

FEATURE OPERATION:

This feature can be controlled (activated or deactivated) by the customer in two ways.

1. The customer dials an activation code and the remote DN or the deactivation code (i.e., Ameritech, Pacific Bell and U S WEST). The codes are in the same format as Call Forwarding Variable (*XX).

   Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to have an incoming call redirected to another Directory Number (DN) if the number dialed (the subscriber's number) is in a busy condition or is not answered. The service is activated by the subscriber dialing an activation code, much in the same manner as Call Forwarding Variable, and entering the remote number that calls will be forwarded to. The called number and the redirected number do not have to be in the same switch. The service and forwarded-to number are deactivated by dialing the deactivation code.

2. The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number from any station (i.e., NYNEX). An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to CFBL, a prompt to select the feature (e.g., CFBL/DA) and the specific action (e.g., activation or deactivation) is returned. After making his change the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and the forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS27

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL/DA - Customer Control on each line if desired.

3. The maximum number of digits that can be programmed are: 1A ESS - 16 digits

   5ESS - 24 digits

   DMS-100 - 24 digits

4. Subscribers may have CFBL with CFDA, Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. In the 1A ESS Call Waiting takes precedence and does not interact with CFBL. Un-answered Call Waiting calls do not revert to CFDA in either the 1A ESS or the 5ESS.

5. References:

   - TR-TSY-000586, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1450, Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding Don't Answer After Call Waiting (CFDA After CW) (1093)

Call Forwarding Don't Answer After Call Waiting is a central office software capability that allows a client to utilize the Call Forwarding Don't Answer (CFDA) feature even though the client's line is also equipped with Call Waiting (CW).

CFDA/CW interaction was initially designed for CW to be dominant over CFDA. For a busy line equipped with both features (CFDA and CW), receiving an incoming call invoked the CW tone, but did not transfer to the CFDA forward-to number. This resulted in the CFDA feature being effective only when the line was not busy and not answered.

This capability improves the call waiting feature by allowing subscribers with the call waiting feature to specify the way an incoming call is to be treated when a call comes in while the subscriber is currently involved in a call with another party. When the call waiting tone is heard, the subscriber has the following options:

- initiate the standard call-waiting options (ignore, flash to put the existing call on hold and answer the second call, flash to go back to the first call, etc.)
- forward the call to another preselected directory number.

The busy and call forwarding options are selected by the subscriber pressing the appropriate key on a DTMF telephone set.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding Don't Answer After Call Waiting	AM - Alternate Answer After Call Waiting	CNS
	AM - Call Forwarding With Call Waiting	CNS
	BA - Call Forwarding Don't Answer	CNS*
	BS - Call Forwarding Don't Answer	CNS*
	NX - Call Forwarding II	CNS*
	PB - Modification of Call Waiting	CNS
	USW - Call Waiting	CNS

FEATURE OPERATION:

The new feature interaction allows a client to subscribe to both CFDA and CW, and receive the benefits of both features. An incoming call to a busy line will invoke the CW tone. The client can place the existing call on hold and answer the call, or by not answering the call, can allow the CFDA feature to assume control of the new call and transfer it to the CFDA forward-to number.

* This capability is inherent with Call Forwarding Don't Answer in Switches which have been modified. Check wire center deployment report for availability.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.11	5E7	BCS32

2. This feature is activated on a office basis. The AT&T switches (1A ESS and 5ESS) have a line-by-line override parameter to accommodate any customer situations where the capability may not be desired.

3. In the DMS-100 switch, the feature only affects those CFDA and CW customers served by RES. There is no line-by-line override parameter in the DMS-100 switch.

4. The line specific CFDA features (number of rings, inter/intraoffice forwarding) will operate the same as though the line were on-hook and not answered.

5. Standard CFDA and CW operation applies.

6. References:

   - LSSGR: Call Waiting, FSD-01-02-1201, TR-TSY-000571, Issue 1 - October 1989, Revision 1 - June 1991 [includes CFDA interaction]

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Don't Answer Intraswitch (1050)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user-specified number of rings (or time interval). The service is activated by a service order. The called number and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval) at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded-to number) must be in the same central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Don't Answer Intraswitch	AM - Alternate Answering	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Don't Answer	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forwarding Don't Answer	CNS
	SWB - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Busy Line/Don't Answer	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" number and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Multiline customers can have CFDA on each line if desired.

3. Calls may be forwarded to any telephone number served by the same central office that serves the base station except DID numbers in the 1A ESS. Forwarding to DID numbers in the 1A ESS will be available in generic 1AE10.09*. (* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.)

4. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

5. References:

   - Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-TSY-000504).

   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Don't Answer Interswitch (1051)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user-specified number of rings (or time interval). The service is activated by a service order. The called number and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval) at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded-to number) may be in the same or a different central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Don't Answer Interswitch	AM - Alternate Answering	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Don't Answer	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forwarding Don't Answer Interswitch	CNS
	SWB - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Don't Answer (Expanded)	CNS
	USW - Call Forwarding Busy Line/Don't Answer (Expanded)	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" number and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS24

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFDA on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central office.

4. The caller may hear multiple call progress tones if the remote DN is busy.

5. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

6. References:

   - Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-TSY-000504).

   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Multiple Simultaneous Calls Interswitch (1052)

This feature provides the capability to specify the number of simultaneous incoming calls to forward from the same number to a hunt group or equivalent arrangement such as DID when the forwarding number and the hunt group (or equivalent) are served by a different central office switch.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Multiple Simultaneous Calls Interswitch	AM - Busy Line Transfer of Alternate Answer	CNS
	BA - Call Forwarding-Multiple Simultaneous Calls Interswitch	CNS
	BS - Call Forwarding Variable Multiple Simultaneous Calls	CNS
	BS - CF BL/DA Multiple Simultaneous Calls	CNS
	NX - Call Forwarding Variable	CNS
	PB - Call Forwarding Variable	CNS
	SWB - Simultaneous Call Forwarding	CNS
	USW - Call Forwarding Variable	CNS

FEATURE OPERATION:

The maximum number of multiple simultaneous call forwarding is Telephone company defined on a per line basis, and on the basis of the type of call forwarding, at the time of service order entry.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	5ESS	DMS-100
Earliest Generic Release	5E2(2)	BCS28

2. This capability is available for the Call Forwarding Variable (CFV), Call Forwarding Busy Line (CFBL) and Call Forwarding Don't Answer (CFDA) features.

3. In the 5ESS switch the number of simultaneous calls allowed can range in size from one to ninety-nine. In the DMS-100 the size can range from 1 to 1024 via the Residential Enhanced Services.

4. In the DMS-100 switches, there may be some limitations on providing this for CFBL or CFDA depending on the current Generic program of the serving central office.

5. Reference for Call Forwarding Variable:

   - TR-TSY-000580, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1401 Call Forwarding Variable, Issue 1, October 1989.

   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

Call Forwarding - Variable (1053)

This capability provides the ESP's client with the ability to forward all calls to a second directory number for handling. As part of the activation of the feature, an associated call is placed to the ESP's forward-to number.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable	AM - Call Forwarding Variable	CNS
	BA - Call Forwarding	CNS
	BS - Call Forwarding Variable	CNS
	NX - Call Forwarding	CNS
	PB - Call Forwarding Variable	CNS
	SWB - Call Forwarding	CNS
	USW - Call Forwarding Variable	CNS

FEATURE OPERATION:

To activate call forwarding variable with the ESP's number as the forward-to number, the ESP's client dials the call forwarding variable activation code. A recall dial tone (stutter dial tone) is provided, and then the ESP's client dials the ESP's number. When the ESP answers the call, activation is complete. (If the ESP does not answer, the customer may repeat the process within a specified amount of time, e.g., one minute, and the feature will be activated.) Depending on the type of central office switch serving the ESP's client, while call forwarding variable is active, the ESP's client's line will receive a reminder ring whenever a call is forwarded.

To deactivate the feature, the ESP's client dials the call forwarding variable deactivation code.

When call forwarding variable is active, the ESP's client's ability to originate calls will be unaffected.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS23

2. Call Forwarding Variable will override Call Forwarding Don't Answer and Call Forwarding Busy Line if all three features are active at the same time.

3. Calls may be forwarded to any telephone number including DID numbers served by the same or a different central office.

4. References:

   - TR-TSY-000580, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1401 Call Forwarding Variable, Issue 1, October 1989.

   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Variable - Activation Without Courtesy Call (1054)

This capability provides the ESP's client with the ability to activate the call forwarding variable (forward all calls) feature without completing a call to the ESP's forward-to number.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable - Activation Without Courtesy Call	AM - Call Forwarding Variable	CNS
	BA - Call Forwarding-Variable-Activation Without Courtesy Call	CNS
	BS - Remote Access - Call Forwarding Variable	CNS
	NX - CallAbility[SM] Feature Access	CNS
	PB - Call Forwarding Variable	CNS
	USW - Call Forwarding Variable Without Call Completion	CNS

FEATURE OPERATION:

To activate call forwarding variable with the ESP's number as the forward-to number, the ESP's client either dials the call forwarding variable activation code of the form *XX or an access number.

1. Dialing an activation code (i.e., Ameritech, Bell Atlantic, BellSouth, Pacific Bell and U S WEST). A recall dial tone (stutter dial tone) is provided, and then the ESP's client inputs the ESP's number by dialing it. If the activation can be accomplished for the designated forward-to address, then the switch responds with confirmation tone.

2. Dialing an Access Number (i.e., NYNEX). The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number) from any station. An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to the service a prompt to select the feature (e.g., CFV) and the specific action (i.e., activation) is returned. After making the change the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	5ESS
Earliest Generic Release	5E2(2)*

* Requires Business and Residence Custom Service (BRCS).

2. When call forwarding variable is active, the ESP's client's ability to originate calls will be unaffected.

3. References:

   - TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989
   - TR-TSY-000580 Call Forwarding Variable FSD 01-02-1401, Issue 1, October 1989.

[SM] CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

Call Forwarding - Variable - Remote Activation/Control (1055)

This capability gives the ESP's client the ability to activate or deactivate the call forwarding variable (forward all calls) feature from remote locations other than their base station. The signaling used to activate or deactivate the call forwarding feature from the remote location must be from a Dual Tone Multi- Frequency(DTMF) set.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable - Remote Activation/Control	AM - Call Forwarding - Variable - Remote Activation/Control	CNS
	BA - Ultra Forward	CNS
	BS - Remote Activation of Call Forwarding	CNS
	NX - CallAbility[SM] Feature Access	CNS
	PB - Call Forwarding-Variable-Remote Activation/Control	CNS
	SWB - Remote Activation of Call Forwarding	CNS
	USW - Remote Access Forwarding	CNS

FEATURE OPERATION:

The ESP's client has two options for changing the forward-to number from a remote station:

1. The remote activation of call forwarding variable feature provides a dedicated directory number that can be used for remote activation (i.e., Ameritech, Bell Atlantic, BellSouth, Pacific Bell, Southwestern Bell). A caller may place a call to this remote activation directory number from any station. Calls to this number are answered with a tone or announcement. The caller then dials, on a DTMF station from his/her remote location, his/her home (base station) directory number and a security code. If the dialed directory number and security code match and that customer subscribes to remote activation, confirmation tone followed by dial tone is returned. The customer then proceeds through the call forwarding activation/deactivation procedure as if at home (at the base station).

2. Dialing an Access Number (i.e., NYNEX, U S WEST). The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number) from any station. An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to remote activation, a prompt to select the feature (e.g., CFV) and the specific action (e.g., activation or deactivation) is returned. After entering their selection, the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and the forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS*	5ESS*	DMS-100*
Earliest Generic Release	1AE10	5E5	BCS28

Note: * This service may be provided via a switching feature in the switch or via an adjunct processor.

[SM] CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

2. Reference:

   - Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504)

Call Forwarding With Variable Rings (1102)

In the event that the called telephone number is not answered within a designated parameter, normally three to four rings, the Call Forwarding Don't Answer feature automatically forwards incoming calls to a predetermined, dialable telephone number served by the same central office switch, or provides interswitch forwarding to a predetermined, dialable telephone number. This feature provides the ability to change the operative number of rings prior to call forwarding.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding With Variable Rings	AM - Customer Changeable Number of Rings	CNS
	BA - Ring Count Change	CNS
	NX - CallAbility[SM] Feature Access	CNS

FEATURE OPERATION:

This feature is modified on a line basis by a service order. The number of rings (time interval) is selected at the time of the service origination or at any time the customer requests a change.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE11.03	5E6	BCS 29

2. The minimum and maximum number of rings (time interval) is limited on a per switch basis. The normal time range is 0 to 60 seconds.

3. Reference:

- GR-1520, Ring Control, Issue 2, October 1994 (component of FR-64)

[SM] CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

Call Waiting - Cancel (1056)

Cancel Call Waiting allows a subscriber with the Call Waiting feature to inhibit reception of the Call Waiting Tone for the duration of a single call. This prevents interruption of data traffic or interruption during an important telephone call.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Waiting - Cancel	AM - Call Waiting	CNS
	BA - Tone Block	CNS
	BS - Call Waiting	CNS
	NX - Cancel Call Waiting	CNS
	PB - Call Waiting	CNS
	SWB - Cancel Call Waiting	CNS
	USW - Call Waiting	CNS

FEATURE OPERATION:

1. When a subscriber with the Call Waiting Feature wishes to cancel the Call Waiting feature during the call, they must depress the receiver button, listen for dial tone, and dial Star (*) plus 70 for touchtone (DTMF) phones or dial 1170 for rotary dial (DP) phones (Cancel Call Waiting Code) for a POTS line or a Business Group line. After dialing the code, the subscriber listens for confirmation tone and is then automatically reconnected to the call in progress. The Call Waiting feature has then been deactivated and no interruptions are allowed during the call.

2. When a subscriber with the Call Waiting Feature wishes to cancel the Call Waiting Feature prior to making a call, they must lift the receiver, listen for dial tone, and dial Star (*) plus 70 for touchtone (DTMF) phones or dial 1170 for rotary (DP) phones (Cancel Call Waiting Code) for a POTS line or a Business Group line. After dialing the code, the subscriber listens for confirmation tone followed by dial tone. The Call Waiting Feature has then been deactivated and no interruptions are allowed during the call.

3. Call Waiting will be re-established when the call is terminated.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Call Forwarding Variable is compatible with Call Waiting and Cancel Call Waiting service.

3. Call Hold and Call Waiting with the Cancel option can be assigned to the same line.

4. Call Pickup and Call Waiting with the Cancel option can be assigned to the same line.

5. Speed Calling and Call Waiting with the Cancel option can be assigned to the same line.

6. Call Waiting with the Cancel option may be assigned to either or both parties on a Two-Party Line.

7. Cancel Call Waiting may not be provided on the following lines:

   - Coin Lines
   - Denied Originating Lines
   - Four and Eight Party Lines
   - PBX Lines
   - Hotel/Motel Calls Routed to TSPS

8. References:

   - TR-TSY-000572, Module of LSSGR FR 64 (formerly FR-NWT-000064), FSD 01-02-1204 Cancel Call Waiting, Issue 1, July 1989, Revision 1, October 1993.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Called Directory Number Delivery via DID (1057)

This service allows the central office switch to deliver all or part of the destination address to the ESP at the time the call is established. Usually, the destination address delivered is the same as the number originally dialed. When number translations have occurred, e.g., 800 calls, the DID number delivered is not the called number.

Generic Name of ONA Service	Product Name	BSE or CNS
Called Directory Number Delivery via DID	AM - Direct Inward Dialing Trunk Termination	BSE
	BA - Direct Inward Dialing Service	BSE
	BS - Direct Inward Dialing	BSE
	NX - DID	BSE
	PB - Direct Inward Dial Service	BSE
	SWB - Direct Inward Dialing	BSE
	USW - Called Directory Number Delivery (DID)	BSE

FEATURE OPERATION:

1. Customers order this service from the telephone company. A client calling a customer is generally unaware that the customer has Direct Inward Dialing (DID) service. The client is not required to perform any additional actions to have the call delivered via a DID trunk group.

2. In a PBX type application, the service allows a client to reach a specific PBX station without the assistance of an attendant or other intermediary.

3. The number of digits forwarded by the central office switch is determined at the time the service is ordered. The customer must also arrange for a block of telephone numbers to be associated with the DID trunks.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS17

2. A customer may elect to receive Dial Pulse or Dual Tone Multifrequency (DTMF) signaling when using analog facilities. Some companies may offer Multifrequency (MF) outpulsing/signaling to the ESP community. If both the central office switch and the customer's equipment are digital, the customer may be able to order DID trunks with digital connectivity.

3. This service is an incoming service (to the customer's CPE) and is typically a "trunk side" service.

4. References:

   - TR-TSY-000524, Module of LSSGR FR-64 (formerly FR-NWT-000064), Attendant and Customer Switching System Features, Issue 2, July 1987, Revision 1, April 1991.

This service, if offered as a BSE, may be associated with the Circuit Switched Line or Trunk basic serving arrangement, as stated in the individual ONA plans.

Called Directory Number Delivery via ISDN Q.931 *

*** A waiver for Switched Access Feature Group K service was denied by the FCC, in CC Docket 89-79, Order dated 7/11/91. As a result, Southwestern Bell Telephone Company was unable to file a tariff on Called Directory Number Delivery via ISDN Q.931.**

Called Directory Number Delivery via 900NXX (1059)

This capability will provide the ESP with the directory number that terminated the call via a circuit switched trunk access arrangement. The method used is 900NXX dialing and Feature Group D (FG D) signaling protocol. The called directory number information (900NXXXXXX) is included within the FG D signaling protocol. The assignment of a 900NXX number to each ESP provides the ESP the capability to assign up to 9999 line numbers. With this capability, the FG D signaling protocol would deliver the specific dialed line number (900NXXXXXX) to the ESP.

Generic Name of ONA Service	Product Name	BSE or CNS
Called Directory Number Delivery via 900NXX	AM - Called Directory Number Delivery	BSE
	BA - 900 Access Service	BSE
	NX - 900 Access Service	BSE
	SWB - Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D)	BSA *

FEATURE OPERATION:

This feature is activated/deactivated by an Access Service Order.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS17

2. The service is LATA wide and can be accessed either at the tandem or at the end office. Both access arrangements must be properly equipped with Feature Group D protocol trunks to the 900NXX serving carrier.

3. Calls that originate from non-FG D protocol offices will be handed off to the ESP at the access tandem using the FG D protocol.

4. References:

   - Feature Group D protocol is described in LSSGR FR-64 (formerly FR-NWT-000064), GR-690, Exchange Access Interconnection FSD 20-24-0000, Issue 2, September 1995, Revision 1 - October 1996 (replaces TR-NWT-000690.

   - GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334).

This service is associated with the Circuit Switched Trunk basic serving arrangement.

* For Southwestern Bell Telephone Company, this is an inherent feature of Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D) service.

Calling Billing Number Delivery - FG B Protocol (1060)

This arrangement allows the ESP to receive the billing number (ANI - 7 digit) of the party who originated the call to the ESP with the signaling information that is transmitted to the ESP during call setup. This signaling information will be transmitted using a Feature Group B protocol over a direct circuit switched trunk side connection.

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Billing Number Delivery - FG B Protocol	BA - Automatic Number Identification (ANI) - Trunk Side BSA-950 Option	BSE
	BS - Called/Calling Number Information - ANI Via FG B/TSBSA Technical Option 1 *	BSE
	NX - Automatic Number Identification	BSE
	USW - Automatic Number Identification	BSE

FEATURE OPERATION:

1. An ESP's client will dial (1)+950+0XXX or (1)+950+1XXX to reach the ESP. The XXX is the ESP's Carrier Identification Code (CIC).

2. ESP equipment may need to prompt the end user (e.g., via second dial tone) for additional information in order for the ESP to process the call.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS19

2. ESPs that purchase trunk side access service utilizing FG B protocol will be assigned a Carrier Identification Code (CIC) and must establish a Point of Presence (POP) in each LATA served. The CIC code will be the same for both FG B protocol and FG D protocol. However, in the future, CIC codes for trunk side access services utilizing FG B protocol and FG D protocol may be assigned independently.

3. ESPs must order direct trunks between each FG B protocol end office switch they wish to serve and their POP. The ANI optional feature must be ordered on all trunks. (Calling Billing Number Delivery - FG B Protocol cannot be provided using tandem arrangements, as the tandems utilizing FG B protocol do not have the ability to pass ANI.)

4. The ANI data forwarded to the ESP consists of the seven (7) digit billing number of the station originating the call and one ANI information digit.

* BellSouth will only offer this service on an interLATA basis.

5. Destination code information, such as the called number, may be transmitted to the ESP from rotary stations provided the ESP orders the Rotary Dial Station Signaling option. This feature is available only from suitably equipped end offices.

6. Calls may be forwarded to ESPs using call forwarding services.

7. This service may be available in other switches equipped for Equal Access service.

8. References:

   - TR-TSY-000698 Feature Group B FSD 20-24-0300, Issue 1, June 1989, Rev. 1, July 1990.
   - TR-NPL-000175 Compatibility Information for Feature Group B Switched Access Service, Issue 1, July 1985.
   - GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994.

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

Calling Billing Number Delivery - FG D Protocol (1061)

This arrangement allows the ESP to receive the billing number (ANI - 10 digit) of the party who originated the call to the ESP with the signaling information that is transmitted to the ESP during call setup. This signaling information will be transmitted using a Feature Group D protocol over a circuit switched trunk side connection.

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Billing Number Delivery - FG D Protocol	AM - Calling Billing Number Delivery (i.e., ANI)	BSE
	BA - Automatic Number Identification (ANI) - Trunk Side BSA - 10XXX Option	BSE
	BS - ANI	BSE
	NX - Automatic Number Identification	BSE
	PB - Automatic Number Identification	BSE
	SWB - Automatic Number Identification	BSE
	USW - Automatic Number Identification	BSE

FEATURE OPERATION:

1. An ESP's client that is presubscribed to that ESP will dial (1) + 7/10 digits to reach the ESP. If the ESP's client chooses another carrier as his/her presubscribed carrier, the ESP's client would dial 10XXX (and/or 101XXXX) + (1) + 7/10 digits or 10XXX (and/or 101XXXX)+# to reach the ESP. The XXX (and/or XXXX) would be the ESP's Carrier Identification Code (CIC).

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. ESPs that purchase trunk side access service utilizing FG D protocol will be assigned a Carrier Identification Code (CIC) and must establish a Point of Presence (POP) in each LATA served.

2. ESPs may order (1) direct trunks between each equal access switch and the ESP's POP, or (2) trunks between FG D protocol equal access tandems and the ESP's POP, or (3) a combination of direct and tandem trunks. The trunks must be ordered with the ANI feature where ANI is an optional feature, in order for the ESP to receive the calling billing number.

3. Calls may be forwarded to the ESP using call forwarding services.

4. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS19

5. The service may be available in other switches equipped for Equal Access service.

6. This service may be available with CCS7 protocol.

7. References:

   - LSSGR FR-64 (formerly FR-NWT-000064), GR-690, Exchange Access Interconnection FSD 20-24-0000, Issue 2, September 1995, Rev 1 - October 1996 (replaces TR-TSY-000690).

   - TR-NPL-000258 Compatibility Information for Feature Group D Switched Access Service, Issue 1, October 1985.

   - GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334, Issue 3).

8. References for CCS7:

   - GR-905 Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and ISDN User Part (ISDNUP), Issue 2, December 1996, Revision 1 - December 1997 (replaces TR-TSV-000905, Issue 2).

   - GR-394 Switching System Generic Requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (ISDNUP), Issue 2, December 1997 (replaces TR-NWT-000394, Issue 4).

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

Calling Billing Number Delivery - via ISDN Q.931 Protocol *

*** A waiver for Switched Access Feature Group K service was denied by the FCC, in CC Docket 89-79, Order dated 7/11/91. As a result, Southwestern Bell Telephone Company was unable to file a tariff on Calling Billing Number Delivery via ISDN Q.931.**

Calling Directory Number Delivery - via ICLID (1064)

Calling Directory Number Delivery via Calling Number Delivery (CND) (CLASS[SM]) allows the subscriber to receive the telephone number of the caller prior to answering the call.

When Calling Number Delivery (CND) is assigned to the subscriber's line, the directory number of the calling party, the time of the call and the date are sent to, and displayed on, the called party's Customer Premises Equipment (CPE) during the first long silent interval of the ringing cycle (between the first and second rings). If the calling party is outside the area in which the service works, the called party's CPE will receive an "O" which in most cases is displayed as "Out of Area" (actual display is the function of the CPE used).

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Directory Number Delivery- via ICLID	AM - Caller ID	CNS
	AM - Caller ID With Call Waiting	CNS
	BA - Caller ID	BSE
	BS - Caller ID	CNS
	NX - Caller ID	CNS
	PB - Caller ID	BSE
	SWB - Caller ID	CNS
	USW - Caller Identification - Number	BSE

FEATURE OPERATION:

The customer must contact the telephone company to have the Calling Directory Number Delivery service activated. Once the translation changes have been made to the customer's line and the customer has installed the appropriate CPE, the calling number, date and time of the call is automatically transmitted to the customer's CPE. If the service is offered on a usage-sensitive basis, the customer has the option of turning the display device on and off by using the service access codes *65 or 1165 for activation and *85 or 1185 for deactivation. If the service is offered on a flat-rate basis, the display device cannot be turned on and off using the access codes.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

NOTE: * Available on intraoffice basis with generic 1AE9.

SM CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

2. The serving central office switch must be equipped with the appropriate CLASS[SM] Calling Number Delivery software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS[SM] and the Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7.

3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to multiparty lines, coin terminating and 1A ESS remote switching system (RSS) lines. This service requires on-hook transmission, therefore there may be instances (MFT, Channel Banks) where this service may not work. An exception is Ameritech's offering of "Caller ID With Call Waiting."

4. The subscriber must have a station set or a display device adjunct to the station set capable of receiving and displaying the calling directory number. The subscriber is responsible for the purchase and installation of this display device.

5. If the subscriber answers the telephone during the first ringing interval, the calling directory number will not be displayed at the CPE.

6. References:

   - TR-NWT-000031, CLASS[SM] Feature: Calling Number Delivery, FSD 01-02-1051, Issue 4, December 1992.

   - GR-30, Voiceband Data Transmission Interface, Issue 1, December 1994 (replaces TR-NWT-000030).

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

Carrier Selection On Reverse Charge (1065)

800 Service is a telecommunications service in which any charges for the call are paid by the called party rather than the calling party. Dial access for the service is in the form of 1-800-NXX-XXXX. [Note: 888 is now equivalent to 800.]

The 800 Service subscriber purchases service from particular areas and incurs all the costs associated with processing calls for the calling parties. The unique reverse billing feature provides the calling party with "free" calls, while allowing the 800 Service customer, the called party, to encourage calls from parties of choice.

Generic Name of ONA Service	Product Name	BSE or CNS
Carrier Selection On Reverse Charge	AM - 800 Dialing Alternative	BSA *
	BA - 800 Access Service	BSE
	BS - 800 Service	BSA
	NX - 800	BSE
	PB - 800 Access Service	BSA **
	USW - 800 Service	BSA *

FEATURE OPERATION:

BOC 800 Service provides for the assignment of a single ten digit 800 Number (i.e., 800+XXX+XXXX) to the customer which can be used on a state wide basis for intraLATA calling. The service can be selected for an area consisting of less than an entire state by specifying a desired area of service.

The basic BOC 800 Service to an individual customer consists of the following capabilities:

1. The assignment of a single 800 number, which allows but does not require the subscriber to use one 800 number nationwide.

2. A termination that connects a location specified by the customer to the BOC's switched facilities.

3. Access to a single exchange or interexchange carrier for intraLATA transport.

4. Carrier selection.

5. Customer defined area of service.

6. The offering of national directory assistance listings to be passed to the national directory assistance provider.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. References:

   - SR-2275, Bellcore Notes on the Networks, Issue 3, December 1997 (replaces SR-TSV-002275, Issue 2)

* For Ameritech and U S WEST, this is a Circuit Switched Trunk Type BSA alternative.

** For Pacific Bell, this is a Circuit Switched Line Type BSA alternative.

- GR-508, LSSGR: Automatic Message Accounting (AMA) Section 8, (A module of LSSGR FR-64) Issue 2, December 1997 (replaces TR-TSY-000508, Issue 3).
- TR-NWT-000533 Service Switching Points (FSD 31-01-0000), Issue 3, January 1994.
- U S WEST document 77318 Compatibility Information for 800 Service Switched Access, May 1986.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Coin Phone With Post Dialing Tone Capability (1062)

This capability provides for the coin phone key pad to remain enabled throughout a call. An ESP's client can then transmit information to the ESP utilizing DTMF signaling. Some non-LEC coin stations are not connected to Central Office lines with a coin class of service and so are not treated as "coin" telephones from a network standpoint.

Generic Name of ONA Service	Product Name	BSE or CNS
Coin Phone With Post Dialing Tone Capability	BA - Public Telephone Service	CNS *
	BS - Post Dial DTMF Signaling From Coin Phone	BSA *
	NX - Post Dialing DTMF Signaling From Pay Station	CNS *
	SWB - Post Dialing Capability (Public Telephone)	CNS
	USW - Semipublic and Shared Coin Lines	BSA *

* This network capability is an inherent function of LEC coin telephone service.

FEATURE OPERATION:

(This discussion applies to Dial Tone First Coin Stations.)

1. A coin station user goes off-hook and dials a local 7 digit number. At some time prior to the dialing of the last digit, the user deposits enough coins to cover the Initial Period charge. At this time, the coin phone key pad is powered by the loop current flow.

2. After receipt of the last digit, (assuming the call is not "911", "0", 1+, etc.), the loop current flow is interrupted so that the Central Office can test for the Initial Period deposit. The key pad is disabled at this time.

3. After it is determined that the initial deposit is present, and after the call is set up, loop current is reapplied to the circuit, enabling the keypad again. The keypad remains enabled throughout the remainder of the call.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2	BCS19

2. References:

   - TR-TSY-000181 Dual-Tone Multifrequency Receiver Generic Requirements for End-To-End Signaling Over Tandem-Switched Voice Links, Issue 1, March 1987.

   - TR-TSY-000450 Generic Requirements for Public Telephone Dial Dual Tone Multifrequency (DTMF), Issue 1, June 1989.

   - GR-528 Public Telecommunications Service FSD 10-01-0000, Issue 1, December 1994 (replaces TR-TSY-000528, Issue 2).

Customer Originated Trace (1066)

Customer Originated Trace (CLASS[SM]) capability allows a customer to have the last incoming number automatically traced. The results of the trace are not provided directly to the customer; they are output to an authorized agency. This capability requires that both the originating and terminating central offices be equipped with Common Channel Signaling (CCS) SS7 and be interconnected by SS7.

Generic Name of ONA Service	Product Name	BSE or CNS
Customer Originated Trace	AM - Call Trace	CNS
	BA - Call Trace	CNS
	BS - Call Tracing	CNS
	NX - Call Trace	CNS
	PB - Call Trace	CNS
	SWB - Call Trace[SM]	CNS
	USW - Call Trace	CNS

FEATURE OPERATION:

Depending on the Local Exchange Company's implementation of this service, the customer either contacts the telephone company to request the service, which requires a service order, or the service is automatically available on an office basis to everyone. In either scenario, once the appropriate translations are done to the line(s), the customer can initiate a trace of the last incoming call (after hanging up) by going off-hook and dialing *57 (1157 for rotary dial). The customer then receives one of the following type announcements depending on how the service is implemented:

- One-Level Announcement

  If the calling number is valid, an announcement is given informing the customer that the trace was successful and instructs the customer what to do next. If the calling number is invalid, an announcement is given indicating why the trace cannot be done and dial tone is returned to the customer.

- Two-Level Announcements

  The customer receives an announcement explaining that they have accessed the Customer Originated Trace service. Then, if the calling number is valid, the customer is instructed to dial "1" if they wish to activate the service and trace the call or to hang up to abort. If the customer dials "1", an announcement is given informing the customer that the trace was successful and instructs the customer what to do next. If the calling number is invalid, an announcement is given indicating why the trace cannot be performed and dial tone is returned to the customer.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)
[SM] Call Trace is a service mark of Southwestern Bell Telephone Company.

The results of the trace are not given to the customer. They are automatically transmitted to an agency (determined by the telephone company), where the information is stored and available for further action.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

Note: * Available on an intraoffice basis with 1AE9.

2. The serving central office switch must be equipped with the appropriate CLASS[SM] Customer Originated Trace software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS[SM] and the Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7. This service is only offered on an intraLATA basis at this time.

3. This is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to multiparty lines and 1A ESS remote switching system (RSS) lines. In addition, this service is unavailable to customers that have denied originating and denied terminating treatment.

4. The information delivered to the authorized agency includes: the called telephone number, the calling telephone number, the date, and the time of the call.

5. If the customer has Call Waiting and if the Call Waiting is activated during a call, the call waited number is the number that will be traced if Customer Originated Trace is activated.

6. References:

   - LSSGR FR-64 (formerly FR-NWT-000064), TR-TSY-000216 CLASS[SM] Feature: Customer Originated Trace, Issue 2, May 1988, Bulletin 1, February 1994.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

Cut Off On Disconnect (1095)

This capability provides a disconnect signal to the terminating party on a call, to indicate when the originating party has hung up. The benefit of this feature is that CPE equipment, such as answering machines, can detect the disconnect, and will not record messages consisting of "Dial Tone."

Generic Name of ONA Service	Product Name	BSE or CNS
Cut Off On Disconnect	BA - Business Individual Line	BSA *
	BS - Voice Grade Line - Circuit Switched	BSA *
	NX - Circuit Switched Line	BSA *

FEATURE OPERATION:

1. A call is placed to a line that has the "Cutoff On Disconnect" feature. After a predetermined number of rings, during which the called party does not answer, the called party's answering machine is connected to the call to record a message.

2. The calling party, wishing to speak with a person, decides not to leave a message, and hangs up. The terminating office sees an off-hook condition generated by the answering machine, and begins calling party disconnect timing.

3. After expiration of the timing interval, if the called party (answering machine) is still off-hook, and the line **does not** have the "Cutoff On Disconnect" feature, Dial Tone is applied to the line, which the answering machine records until the Central Office times out and begins Permanent Signal Treatment. However, if the line **is** equipped with the "Cutoff On Disconnect" feature, the Central Office supplies a 500 ms open to the line before applying Dial Tone. The answering machine can then recognize that the calling party has disconnected, and can drop the call before it starts to record Dial Tone.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	DMS-100
Earliest Generic Release	BCS25

2. The DMS-100 requires NTX901AA, F2653 - COD Option On An Office Basis and BCS25. The feature is assignable on both a line option and an office-wide basis.

References: not available.

* This service is inherent in the Circuit Switched Line basic serving arrangement in certain Central Offices.

DID Trunk Queuing (1067)

DID Trunk Queuing will permit calls directed to an ESP's All Trunks Busy DID Trunk Group to be held for delivery when a DID trunk becomes idle. This would allow the ESP to answer calls from clients that would otherwise have received a busy signal.

Generic Name of ONA Service	Product Name	BSE or CNS
DID Trunk Queuing	BA - DID Trunk Queuing	BSE
	PB - DID Trunk Queuing	BSE
	USW - DID Trunk Queuing and Basic Announcement	BSE

FEATURE OPERATION:

DID Trunk Queuing allows ESPs to receive and hold calls directed to their busy DID trunk group. This service will place these calls in a queue, to be held until a trunk between the central office and the ESP is available. When a trunk becomes available, a call will be released from the queue and connected to the idle trunk. Calls held in the queue will hear ringing unless the ESP has ordered that a delay announcement be played to the caller.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS
Earliest Generic Release	1AE8A

2. Calls placed in the queue are delivered on a "first in-first out" basis.

3. The number of calls to be held in queue at any one time is established by the ESP at the time the service is ordered.

4. A maximum of four delay announcements is possible.

5. Each delay announcement may vary in length from three to 24 seconds.

6. References:

   - LSSGR FR-64 (formerly FR-NWT-000064) FSD 01-02-0802, Multiline Hunt Service, Issue 1, May 1990, Module TR-TSY-000569.

This service, if offered as a BSE, may be associated with the Circuit Switched Line or Trunk basic serving arrangement, as stated in the individual ONA plans.

Distinctive Ringing (1068)

Distinctive Ringing (CLASS[SM]) alerts a customer via a special ringing pattern when receiving a call from a pre-specified list of directory numbers. If the customer is also a subscriber to Call Waiting service, and is off-hook on a call, a special Call Waiting tone will be sent to the customer if the calling party's number is on the pre-specified list.

Generic Name of ONA Service	Product Name	BSE or CNS
Distinctive Ringing	BA - Priority Call	CNS
	BS - Call Selector	CNS
	PB - Priority Ringing	CNS
	SWB - Priority Call[SM]	CNS
	USW - Priority Call	CNS

FEATURE OPERATION:

The customer must contact the telephone company to initiate Distinctive Ringing service. A service order is required. The customer initiates control of the Distinctive Ringing screening list contents as well as activation and deactivation of the service by dialing access codes as described below. Once the appropriate translations have been made to the customer's line the customer may activate, deactivate and/or use the service as follows:

1. 1A ESS: To activate the Distinctive Ringing service, the customer must go off-hook and dial *61 (1161 for rotary dial). The customer will then receive an announcement providing the following information:

   — The name of the service.

   — The service is now active.

   — The number of entries on the list.

   — The instructions for creating/adding numbers to the list; removing subscriber's entries from the list; reviewing the list.

   To deactivate the service, the customer must go off-hook and dial *81 (1181 for rotary dial). The customer will then receive an announcement providing the following information:

   — The name of the service.

   — The service is now off.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

[SM] Priority Call is a service mark of Southwestern Bell Telephone Company.

— The number of entries on the list.

— The instructions for removing any subscriber list entry; removing all subscriber entered numbers.

2. 5ESS and DMS-100: To activate or deactivate the Distinctive Ringing service, the customer must go off-hook and dial either *61 or *81 (1161 or 1181 for rotary dial). Once either access code has been successfully entered, the customer should receive an announcement providing the following information:

   — The name of the service.

   — The status of the service (active or inactive).

   — The number of entries on the list.

   — The instructions for creating/adding, removing, reviewing the list, changing of service status (active to inactive, inactive to active).

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E6	BCS31**

NOTE: * Available on an intraoffice basis with 1AE9.

** References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. The maximum directory number list size is pre-determined by the telephone company on a company basis and can range from 2 to 31.

3. The serving central office switch must be equipped with the appropriate CLASS[SM] Distinctive Ringing/Call Waiting software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS and Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7.

4. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to customers with the following types of lines: multiparty, hotel/ motel, coin and coinless public, 1A ESS remote switching system lines (RSS) and Centrex attendant with console. In addition, because of the special ringing, this service may not work where channel banks (FX service), MFTs or bridge lifters are used (depending on circuit design).

5. The ringing tone and the call waiting tone that a customer hears have a short-long-short pattern. Some telephone companies use this pattern for more than one service.

6. There are certain digital loop carrier plug-ins that will not transmit the required distinctive ringing.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

7. References:

- TR-TSY-000219 CLASS^{SM} Feature: Distinctive Ringing/Call Waiting, LSSGR FR-64 (formerly FR-NWT-000064), Issue 2, November 1988, Revision 1, May 1992.

- TR-NWT-000220, CLASS^{SM} Feature: Screening List Editing, Issue 3, December 1993.

Distinctive Ringing - Terminating Screening (1069)

Distinctive Ringing - Terminating Screening (non-CLASS[SM]) provides individual ringing signals for customers who have multiple directory numbers (DNs) assigned to a single line appearance of a circuit switch. One DN is designated as the "master" DN and receives regular ringing. Additional DNs associated with the single line appearance receive distinctive ringing signals.

Generic Name of ONA Service	Product Name	BSE or CNS
Distinctive Ringing - Terminating Screening	AM - Call Identification/Multi-Ring Svc.	CNS
	BA - Identa-Ring®	CNS
	BS - RingMaster®	CNS
	NX - RINGMATE®	CNS
	SWB - Personalized Ring[SM]	CNS
	USW - Custom Ringing	CNS

FEATURE OPERATION:

1. A customer may request from the telephone company that up to four Directory Numbers (a primary and three secondary) be assigned to their line. A service order is required.

2. Once provisioned, a unique ringing pattern is applied to the customer's line for each of the assigned directory numbers dialed by the calling party. The calling party always hears a normal audible ringing pattern.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE9	5E4	BCS25

2. This service is only available on single party lines with superimposed ringing.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

® Identa-Ring is a registered service mark of Bell Atlantic.

® RingMaster is a registered trademark of BellSouth.

® RINGMATE is a registered service mark of NYNEX.

[SM] Personalized Ring is a service mark of Southwestern Bell Telephone Company.